

Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed**1.1. Name of the Data, data collection Project, or data-producing Program:**

NY/NJ Metro Area, Hudson River, and South Long Island 2016 FISH Polygons

1.2. Summary description of the data:

This data set contains sensitive biological resource data for marine, estuarine, anadromous, and freshwater fish species in the New York/New Jersey Metro Area, Hudson River, and South Long Island region. Vector polygons in this data set represent fish distributions, spawning and nursery areas, concentration areas, migration areas, anadromous fish runs, and harvest areas. Species-specific abundance, seasonality, status, life history, and source information are stored in associated data tables (described below) designed to be used in conjunction with this spatial data layer. This data set is a portion of the ESI data for the the NY/NJ Metro Area, Hudson River, and South Long Island region. As a whole, the ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil, and include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

1.3. Is this a one-time data collection, or an ongoing series of measurements?

One-time data collection

1.4. Actual or planned temporal coverage of the data:

2014 to 2016

1.5. Actual or planned geographic coverage of the data:

W: -74.595, E: -71.7215, N: 42.8226, S: 39.9993

This reflects the extent of all land and water features included in the overall New York, New Jersey, Hudson River, and South Long Island ESI study region. The bounding box for this particular feature class may vary depending on occurrences identified and mapped.

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Map (digital)

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:**1.8.1. If data are from another observing system, please specify:****2. Point of Contact for this Data Management Plan (author or maintainer)****2.1. Name:**

ESI Program Manager

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:**2.4. E-mail address:**

orr.esi@noaa.gov

2.5. Phone number:**3. Responsible Party for Data Management**

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

ESI Program Manager

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?**4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):****5. Data Lineage and Quality**

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Process Steps:

- 2015-11-01 00:00:00 - Step 1. Selection of species and data sources. Three main sources of data were used to depict fish distribution and seasonality for this data layer: 1) digital/tabular data sets provided by New York State Department of Environmental Conservation (NYSDEC) and New Jersey Department of Environmental Protection (NJDEP); 2) published and unpublished reports; and 3) expert knowledge from resource experts.
- 2015-11-01 00:00:00 - Step 2. Developing ESI data for Atlantic and shortnose sturgeon. Atlantic (NJ state endangered, federally endangered) and shortnose sturgeon (federally and state endangered) were mapped to areas where they are known to occur. Polygons were based on data provided by NYSDEC staff, Dr. Keith Dunton of Delaware State University, published literature, and expert knowledge from Kathy Hattala and Kim McKown of NYSDEC. Important spawning, nursery, and wintering areas on the Hudson River were identified by Kathy Hattala. Coastal aggregation areas of subadult Atlantic sturgeon near the Rockaways and Sandy Hook were based on Dunton and others 2010. An Atlantic sturgeon migratory route along the NY/NJ coast to the 20 m isobath was mapped using Dunton and others 2015. (Citation: ABUNDANCE AND DISTRIBUTION OF ATLANTIC STURGEON (ACIPENSER OXYRINCHUS) WITHIN THE NORTHWEST ATLANTIC OCEAN, DETERMINED FROM FIVE FISHERY-INDEPENDENT SURVEYS)
- 2015-11-01 00:00:00 - Step 3. Developing ESI data for alewife, blueback herring, and American shad. Alewife, blueback herring, and American shad spawning runs were mapped using information provided by NJDEP and NYSDEC as well as knowledge from agency biologists and local experts. River herring runs were mapped to the first known barrier such as a dam or impassable gradient. If the run went beyond the water features in the ESI hydrographic layer, then it was mapped using stream line features and buffered by 5 m to convert to a polygon feature. Embayments on the Hudson River are important to early life stages of river herring and were included as nursery areas. River herring pre-spawning concentrations at the mouths of certain rivers were mapped as migration areas. Timing of migration and spawning was provided by resource experts. Additional anadromous fish concentration areas on the Hudson River were mapped using New York Natural Heritage Program (NY NHP) data, and an anadromous fish migration corridor on the lower Hudson River was mapped using expert knowledge. (Citation: LIST OF HUDSON RIVER TRIBUTARIES AND EMBAYMENTS POTENTIALLY USED BY RIVER HERRING)
- 2015-11-01 00:00:00 - Step 4. Developing ESI data for other fish species in the tidal Hudson River. In addition to sturgeon, river herring, and American shad, special attention was given to mapping the following commercially or recreationally

important species on the Hudson River: American eel, striped bass, Atlantic tomcod, largemouth bass, smallmouth bass, and walleye. The Lower Hudson River and its tributaries provides extensive spawning and nursery habitat for these species. Resource experts from NYSDEC provided most of the information used to map general distributions and critical spawning, nursery, and wintering areas, and seasonalities. The 2002-2007 Hudson fish distribution data (AKRF 2010) were used to delineate spawning and nursery areas for Atlantic tomcod. The National Oceanic and Atmospheric Administration's (NOAA) Mid-Atlantic Estuarine Living Marine Resource (ELMR) data were used map the general distribution, concentration values, and seasonality for other species in the Hudson River estuary based on salinity zones. In some cases, distributions were further refined with additional salinity data from The Nature Conservancy. Important multi-species concentration areas such as Haverstraw Bay were identified using New York State Department of State (NYSDOS) Significant Coastal Fish and Wildlife Habitat digital data and narratives. (Citation: DISTRIBUTION AND SEASONALITY OF FISH ON THE UPPER HUDSON RIVER)

- 2015-11-01 00:00:00 - Step 5. Assessing ocean distribution and abundance of selected species. The ocean distribution of fish was mapped using three fisheries independent trawl survey datasets: NJ Ocean Trawl Survey (OTS), Virginia Institute of Marine Science's Northeast Area Monitoring and Assessment Program (NEAMAP), and National Marine Fisheries Service (NMFS) Northeast Fisheries Science Center Bottom Trawl survey. Independent sampling data from NJ OTS and NEAMAP were provided as catch per unit effort (CPUE) by station. Polygons used to aggregate sampling stations were based on the depth strata used by NJ OTS and correspond to generalized 10-m and 20-m isobaths. These polygons were further divided into along the south shore of Long Island from west to east using divisions at the Fire Island and Moriches inlets. The NJ OTS was the primary dataset used to determine concentration values and seasonality for NJ ocean fish distribution. This is a multispecies survey that occurs five times a year (January, April, June, August, and October). Survey strata are assigned to 3 different depth regimes; inshore (3-5 fathoms), midshore (5-10 fathoms), and offshore (10-15 fathoms). The most recent 10 years of available data (2004 – 2013) were used for this effort. The presence of a species for a given month, in a given depth strata, was based on the occurrence rates. Species caught more than one tenth of the time at sampling stations within a polygon and across the ten-year sampling window were marked as present for that month. Species with similar life history, behavior, and habitat requirements were grouped into ELMR guilds for comparison. Within these guilds, average CPUE for all months was used to assign “LOW”, “MEDIUM”, and “HIGH” concentrations, corresponding to the first, second and third, and fourth quartiles of averaged CPUE respectively. Concentration and seasonality information was sometimes adjusted based on review by NJDEP Bureau of Marine Fisheries staff or to be consistent with published information. Data from NEAMAP were used to map the inshore and midshore fish distributions in NY. Sampling for this program occurs in the spring and fall (typically May and October) and data used for this effort were collected

from 2007 to 2013. NEAMAP data were supplemented with NMFS data (1979-2008) for the offshore polygons and for species not included in the NEAMAP data. Concentrations were assigned using the same method as with NJ OTS. The NMFS data that was downloaded from the U.S. Ocean Biogeographic Information System did not include catch numbers; therefore, species were mapped as “PRESENT” if they appeared in the NMFS bottom trawl survey for a given polygon. EFH vector digital data were used for mapping Highly Migratory Species. A concentration area at Montauk Point Shoals was mapped using NYSDOS Significant Coastal Fish and Wildlife Habitat. (Citation: NORTHEAST FISHERIES SCIENCE CENTER BOTTOM TRAWL SURVEY DATA)

- 2015-11-01 00:00:00 - Step 6. Developing ESI data for freshwater fish species. Recreationally important freshwater fish were mapped in NY using the Recommended Public Fishing Areas vector data and interviews with NYSDEC fisheries biologists on Long Island and in the NYC metro area. These areas were given the mapping qualifier “HARVEST AREA” to emphasize the recreational/ economic value of the species mapped within them. NYSDEC biologists provided seasonality and concentrations. (Citation: DISTRIBUTION AND SEASONALITY OF FRESHWATER FISH IN NEW YORK METRO AREA)

- 2015-11-01 00:00:00 - Step 7. Special considerations in developing the ESI FISH feature data set. The above digital and/or expert knowledge sources were compiled by the project biologist to create the FISH data layer. Depending on the type of source data, two general approaches are used for compiling the data layer: 1) digital data layers are evaluated and used "as is" or integrated with the ESI base map features (ESIP, HYDROP, ESIL) 2) information gathered during initial interviews and reports are compiled and digitized using ESI base map features. See the Lineage section for additional information on the type of source data for this data layer. The ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. If necessary, edits to the FISH data layer are made based on the recommendations of the resource experts and digital data are created.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:

- 1.7. Data collection method(s)
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.2. Name of organization of facility providing data access
- 7.2.1. If data hosting service is needed, please indicate
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:**6.3. URL of metadata folder or data catalog, if known:**

<https://www.fisheries.noaa.gov/inport/item/51278>

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:

https://response.restoration.noaa.gov/esi_download

7.3. Data access methods or services offered:

Data can be accessed by downloading the zipped ArcGIS geodatabase from the Download URL (see Distribution Information). Questions can be directed to the ESI Program Manager (Point Of Contact).

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):

Office of Response and Restoration - Seattle, WA

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.